

Solving the balanced academic curriculum problem using the ACO metaheuristic

Rubio J.-M.

Palma W.

Rodriguez N.

Soto R.

Crawford B.

Paredes F.

Cabrera G.

The balanced academic curriculum problem consists in the assignation of courses to academic periods satisfying all the load limits and prerequisite constraints. In this paper, we present the design of a solution to the balanced academic curriculum problem based on the ACO metaheuristic, in particular via the Best-Worst Ant System. We provide an experimental evaluation which illustrates the effectiveness of the proposed approach on a set of classic benchmarks as well as on real instances. © 2013 José-Miguel Rubio et al.